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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,945	01/17/2006	Richard Wu	CH-7654/MD-02-12-186-ST	2606
157 7590 03/08/2007 BAYER MATERIAL SCIENCE LLC 100 BAYER ROAD PITTSBURGH, PA 15205			EXAMINER LAVILLA, MICHAEL E	
			ART UNIT 1775	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/08/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/542,945

**Applicant(s)**

WU ET AL.

**Examiner**

Michael La Villa

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election of Group II, Claims 19-29, in the reply filed on 11 December 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
4. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 19-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Regarding Claims 19 and 28, it is unclear what is meant by the phrase "substantially free of graphite." Applicant has explained that the meaning of this phrase is "clear on its face." However, previously pending Claim 23 suggested that the phrase could constitute more than 60 % of surface area, which may be inconsistent with its plain meaning. Mere cancellation of Claim 23 does not clarify the metes and bounds of this limitation, and so the rejection is maintained.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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8. A person shall be entitled to a patent unless –
9. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
10. Claims 19-24 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. USPN 5,730,853.
11. Claims 19-22 and 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Saubestre et al. USPN 3,411,995 for the reasons of record in the Office Action mailed on 7 September 2006.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
  1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
14. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. USPN 5,730,853 in view of Cornie et al. USPA 2003/0024611 for the reasons of record in the Office Action mailed on 7 September 2006.

***Response to Amendment***

15. Applicant's cancellation of Claim 23 obviates the claim objection of the Office Action mailed on 7 September 2006, and so the objection is withdrawn.
16. In view of applicant's amendments and arguments, applicant traverses the section 112, second paragraph rejection of the Office Action mailed on 7 September 2006. Except as repeated above for the reasons given above, the rejections are withdrawn.
17. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Smith of the Office Action mailed on 7 September 2006. In view of applicant's amendments and arguments, applicant traverses the section 103 rejection over Smith in view of Cornie of the Office Action mailed on 7 September 2006. Applicant argues that Smith does not teach a surface "substantially free of graphite." While the surface of Smith may comprise more residual graphite than those surfaces exemplified by applicant, the limitation is interpreted very broadly in view of previously pending Claim 23. Moreover, those localized portions of the substrate of Smith which have been cleaned of graphite would be expected to be "substantially free of graphite" even though the entire surface may still retain residual graphite that was not cleaned away. Applicant also argues that Smith does not teach the claimed product-by-process limitations with respect to the manner of graphite removal. Smith teaches ultrasonic agitation at column 6, lines 4-20, which would be expected to be encompassed by the claimed "vibratory finishing techniques" of pending Claim 28. Moreover,

applicant's description at page 4, line 16 of the Specification suggests that any manner of removal of graphite, including those of Claims 28 and 30, provides a structurally acceptable product, rendering the method by which it is achieved as not a basis for establishing patentably distinguishable products. In other words, the resulting products would be expected to be structurally indistinguishable absent as showing to the contrary having antecedent basis in the originally filed Specification. Rejections are maintained.

18. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Saubestre of the Office Action mailed on 7 September 2006. Applicant argues that Saubestre does not teach a surface "substantially free of graphite" due to the presence of carboniferous surface particles. While the surface of Smith may comprise more residual graphite than those surfaces exemplified by applicant, the limitation is interpreted very broadly in view of previously pending Claim 23. Moreover, those localized portions of the substrate of Saubestre which are not carboniferous particles would be expected to be "substantially free of graphite" even though the entire surface contains carboniferous particles. Applicant also argues that Saubestre does not teach the claimed product-by-process limitations with respect to the manner of graphite removal. Applicant's description at page 4, line 16 of the Specification suggests that any manner of removal of graphite, including those of Claims 28 and 30, provides a structurally acceptable product, rendering the method by which it is achieved as not a basis for establishing patentably distinguishable products.

Absent a showing to the contrary, it would also be expected that the surface that never contained graphite is structurally and compositionally indistinguishable from one that had graphite removed, as claimed. Rejection is maintained.

***Conclusion***

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
20. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.
21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.

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22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa  
4 March 2007



MICHAEL E. LAVILLA PH.D.  
PRIMARY EXAMINER